

remained on the host longer or until completely engorged. However, when taken from the host before complete engorgement, they showed no difference in the length of the preoviposition period but deposited their eggs on an average as early as those that were completely engorged when detached, but it is to be noted that they deposited a smaller number of eggs.

Another peculiar feature noted was the difference in the length of incubation period between the eggs deposited at the beginning of oviposition and those last deposited. Take for instance Tick No. 1 which began ovipositing on June 8th and continued until June 21st, covering a period of fourteen days. The eggs began hatching on July 5th and presumably they were all hatched by July 10th. If the eggs first deposited are the first to hatch they would cover an incubation period of twenty-seven days, while if the last deposited eggs were the last to hatch their period would be nineteen days, making a difference of eight days between the eggs first deposited and those of the last of oviposition. From this it appears that eggs first deposited require a longer period of incubation than those deposited later. I hope at a later date to be able to make more extended observations on this feature of the period of incubation.

Fragments on North American Insects—IX.

By A. A. GIRAULT, Washington, D. C.

Nematus ribesii in Virginia (Hym.).

As noted above, larvae in various stages of development were to be found at Blacksburg on currants and gooseberries on May 13, 1902. From some of those kept indoors, adults were obtained on May 26, after about twelve days in the cocoon.

Nematus ventralis (Hym.).

Some larvae obtained from willow in the same locality June 28, 1902, cocooned on the following day and emerged between July 23 and 31, after from twenty-four to thirty-two days.

Callirhytis glandulosus in Virginia (Hym.).

Professor William B. Alwood was kind enough to bring to me from Cumberland Court House, Virginia, some branches of scrub oak on which were some very remarkable galls. They were within the acorns (July 30, 1901) and Professor Alwood told me that when he was examining them when on the trees, the small cases containing the larva

would grow out, so to speak, of the acorn and drop to the ground, "growing out" by means of fleshy stalks which would extend themselves and push the larval cases out. The dropping of the cases "made a continual patter," resembling that of rain on the foliage of trees in a forest. Upon examining the acorns, the teethlike larval cases were found to be arranged in a row at the base of the kernel of the acorn where they fitted into cavities; each one was upon a fleshy stalk; an acorn may contain from 4 to 6 of them. They are double, the inner case being pea-shaped and holding the larva. The larvae continued alive up to October 2, but died during the winter. The identification was through the kindness of Dr. L. O. Howard.

Callirhytis seminator (Harris) in Maryland and Virginia (Hym.).

By June 7, 1901, pupae were present in the galls of this species at Annapolis, emergence following about one week later. On June 16, the same year at Blacksburg, Virginia, adults were emerging, continuing up to July 3.

Syneches thyridopterygis (Riley) (Hym.).

This parasite was reared from the overwintered bags of *Thyridopteryx ephemeraeformis* Haworth at Annapolis, Maryland, June, 1901. The identification was by Ashmead.

Laelius trogodermatis Ashmead (Hym.).

In the original description of this species no mention is made of the carinae on the metathorax of which, in this species, there are 9, the five mesial ones complete, the two in the dorso-lateral aspect abbreviated caudad, not running quite half the length of the segment. The scutellar impression is crescentic. These notes from a single female identified by Ashmead.

The Trichogrammatid Genus Ophioneurus (Hym.).

For probable description of development of this genus, see Ganin, Zeitschr. f. Wiss. Zool., XIX, pp. 381-451.

Metamymar aleurodis Riley MS. and Pteratomus putnami Packard (Hym.).

The former mymarid has been overlooked. I do not know what it is nor whether it is described in the following reference: Fourth Rep. U. S. Ent. Commission, p. 107, note 29a. It is probably a *nomen nudum*. For figure of the rare *Pteratomus* see Amer. Naturalist, 1878, XII, pp. 445-448.

Polynema bifasciatipenne (Girault) (Hym.).

I find a reference under morphology of Mymaridae to Ayers on *Teleas* in Memoirs Boston Society of Natural History, III, 1884, pp. 261 ff. After *Teleas*, for some reason I had written "(= *Polynema bifasciatipenne?*)" Also I noted Ayers' references to Filippi and a marginal note referred to Packard's and Balfour's embryologies.

A Supposed Mymarid Parasite of Tabanid Eggs (Hym., Dip.)

From a mass of tabanid eggs obtained from the margin of a stream at Butler, Illinois, July, 1910, a mymarid near *Alaptus* issued but the specimen was lost. A number of *Phanarus tabanicvorus* Ashmead also issued from the same mass. The mymarid probably came from the eggs.

Records of Parasites and Predators of Spider Eggs (Hym., Dip., Aran.).

I had collected the following references, which should be brought together, though not complete: *Acoloides cmertonii* Howard (Bull. 45, U. S. Nat. Mus., pp. 171-172; Insect Life, II, p. 202); *Acoloides saitidis* Howard on *Saitis pulex* (Insect Life, IV, p. 124), on *Phydippus morsitans* (Proc. Ent. Soc. Washington, II, p. 300); *Acolus zabriskici* Ashmead (Bull. 45, U. S. Nat. Mus., p. 175); *Aradophagus fasciatus* Ashm. on *Pityophthora querciperda* Swz. and *Brachyrhynchus granulatus* Say (De Dalla Torre, Cat. Hymenop., V, p. 512); *Baeus americana* Howard on Epeirids (Insect Life, II, pp. 270-271; Proc. Ent. Soc. Washington, II, p. 299); *Eupelmus piceus* Riley on *Argiope argentata* (Proc. Ent. Soc. Washington, II, 1892, p. 297); *Pimpla* spp. predaceous upon *Epeira angulata* and *Argiope riparia* (Proc. Ent. Soc. Washington, II, p. 294 et al.); *Pimpla inquisitor* on *Argiope riparia* (Insect Life, I, p. 324); *Pezomachus obesus* Brues from egg capsules of a spider (Bull. Wisc. Nat. Hist. Soc., VIII, p. 72); *Aphiochaeta epeirae* Brues on *Epeira* sp. (? eggs) (Aldrich, Cat. N. A. Diptera, 1905, p. 336); Cyrtidae on spiders (? eggs) (ib., p. 219); *Sarcophaga piceus* on *Argiope argentata* and *Phydippus opifex* (Insect Life, IV, p. 269). See also this journal, VII, 1896, p. 320; Proc. Ent. Soc. Washington, V, p. 308 and Insect Life, VI, pp. 259-260.

Insects Eaten by the Yellow-billed Cuckoo (Hem., Dip., Lep.).

A stomach of one of these birds killed on May 31, 1902, was roughly examined by Professor E. A. Smythe (Blacksburg, Virginia), who gave me the contents as follows (sex and age of bird not noted): 1 intact adult *Tibicen septendecim*, a partly digested adult tipulid and a finely divided mass of hairy caterpillars, probably those of *Malacosoma americana*.

The Birdbug Attacking Human Beings (Hem.).

Although it is known that the close allies of the common bedbug (*Cimex lectularius* Linnaeus) will feed upon human blood in confinement (it has been proved for *C. columbarius*), cases are certainly rarely made known where the parasites naturally attack human beings. The following extract from a letter received from Prof. Glenn W. Herrick in September, 1910, is unique, or if not so, still of great interest and impor-

tance. Professor Herrick wrote: "I am in receipt of two very interesting letters from a woman in Oriskany, New York, who is much worried regarding what she thinks are bedbugs. However, I have finally obtained specimens from her, and they are much smaller than the ordinary bedbug. Since the chimney in the house is full of swifts, and these bugs apparently invaded the room from an opening in the chimney, I take it for granted that they are a species parasitic upon the swift. Even if this be true, her letter is interesting from the fact that she maintains that these bugs have attacked voraciously the occupant of the bed in the room next to the chimney. She says, 'There is no doubt, I think, of their having bitten my sister not only two nights, but fresh bites having appeared during the second day, we examined her clothing and found them (the bugs) hidden there.' So far as I am aware, this is a new role for this particular bug."

Specimens which I received from Professor Herrick were most probably *Cimex hirundinis*, but I could not compare them with actual specimens of that species. The evidence is not complete, but the facts incline me to believe it more and more probable that the allies of *lectularius* will readily forsake their original or natural hosts when these latter are near to dwellings and attack human beings. A fowlhouse or a pigeon loft may thus become a center of infestation and the possibilities of disease transmission from animal to man so much augmented.

Tibicen septendecim (Linnaeus) in Montgomery County, Virginia (Hem.).

On June 21, 1901, and later, English sparrows were observed catching the adults of this species above a half dozen times, once or twice when the cicada was flying. I noticed the characteristic egg-slits in the following trees: White cedar (*Chamaecyparis sphaeroides*; trees apparently not injured); Wild cherry (*Prunus* sp.; small slits); European linden (*Tilia europaea*; wounds large and ruptured); White oak (*Quercus alba*; injury very noticeable); Red oak (*Quercus rubra*; injury noticeable); Apple (*Pyrus malus* vars.); Dogwood (*Cornus*); Hickory (*Carya* sp.); Black walnut (*Juglans nigra*); Lilac (*Syringa? vulgaris*); Persimmon (*Diospyros virginiana*); Peach (*Prunus persica*); Poplar (*Populus* sp.); Sycamore (*Platanus occidentalis*; small, subtriangular punctures); an unknown tree in forest of mountains;